The first part of this book is given up to analyses of single constituents, while farther on the the student is given methods of analyzing food, water, urine and soils. It is impossible to treat these subjects satisfactorily in a few pages, and the mere mechanical analysis of a few of these products would prove of little value to one who might have to deal with related substances. The chief objection to the book might be summed up in the statement that it is too mechanical.

J. E. G.

The Study of Man. By Alfred C. Haddon, M. A., D. Sc., etc. New York, G. P. Putnam's Sons. 1898. Illustrated. Pp. 410. (The Science Series; Edited by J. McKeen Cattell and F. E. Beddard.)

In examining Dr. Haddon's work it is just to bear in mind that he does not present it as 'a treatise on anthropology or its methods, but merely a collection of samples of the way in which parts of the subject are studied.' It is 'not intended for scientific students,' but for the amateur and the general reader.

It may be pardoned in a reviewer who has followed with admiration Dr. Haddon's thorough ethnographical work to express a sense of regret that the author did not choose a severer model and a higher intention than he has acknowledged in these words. What the 'study of man' needs more than anything else just now is a series of comprehensive text-books, setting forth the methods pursued, the results attained, and the fields of future investigation adopted by and included in the general term Anthropology. It would be possible to write these in a form not repellent to the general reader and yet meeting fully the requirements of the student. It was the error of the series commenced publication by the Appletons that it drifted into small monographs, well enough in their way, but of slight educational value; and education in anthropological matters is what is most lacking at the present epoch.

Returning to Dr. Haddon's 'samples,' the inventory of them includes specimens mainly from two departments of anthropology, somatology and folk-lore. They are the two extremes of the anthropological curriculum, and perhaps for that very reason were chosen. In the former he discusses in a pleasant way the principal measurements in anthropometry, Bertillon's methods, skull-indices, the color-scale in hair and eyes, and the form of the nose. A chapter is devoted to Dr. Collignon's admirable monograph on the ethnography of the Dordogne district. Others take up the evolution of the cart and the origin of the Irish jaunting car.

The latter half of the book is devoted to games and toys, those of children, savages and grown-up people. This is a comparatively recent field of research, and its fruitage promises to be of much greater value than was imagined by the earlier writers. Games are frequently the survivals of sacred ceremonies, and are peculiarly tenacious of early forms and expressions. Of the subjects under this head considered by Dr. Haddon the more important are kites, tops, the bull-roarer, and singing, courting and funeral games. Concerning all of them he collects interesting material and adds to it from his personal observations.

In his last chapter the author reprints the directions of the committee 'to conduct an ethnographical survey of the United Kingdom' appointed by the British Association in 1892, with additional practical suggestions of his own. A thorough index closes the volume.

The illustrations are sufficiently numerous, and include ethnographic maps of England and France, types of skulls, noses, etc., illustrations of vehicles, and of various cards and toys. They are well printed, and the manufacture of the book in general may be commended. As the first number of the 'Science Series' it will be welcomed as a promising contribution to the higher department of popular literature.

D. G. Brinton.

SCIENTIFIC JOURNALS.

The Astrophysical Journal for June, which opens the eighth volume, contains as usual a series of important articles. In the first of these by Professor T. N. Thiele, of the Copenhagen Observatory, discusses the resolution into series of the third band of the carbon band-spectrum. Professor Michelson contributes a further account of his Echelon spectroscope, to which we have already called attention. Notes on the

Zeeman effect from the physical laboratory of Johns Hopkins University are contributed by Messrs. Ames, Earhart and Reese. Other articles are by Professor C. Runge, of Hannover; Mr. W. H. S. Monck and Mr. L. E. Jewell.

THE July number of *The Psychological Review* opens with an article by Sig. Gustavo Tosti, discussing the fields and inter-relations of social psychology and physiology. Professor J. H. Hyslop contributes an article entitled 'Psychical Research and Coincidences,' in which he shows that individual cases of premonition may be explained by normal processes of mind. Professor Chas. H. Judd treats the visual perception of the third dimension. There are shorter articles by Professor Caldwell, on 'Professor Titchener's View of the Self;' by Dr. MacDonald, on 'A Temporal Algometer;' by Professor Baldwin, on 'Social Interpretations;' and by Professor Cattell, criticising Professor Münsterberg's article on the 'Danger from Experimental Psychology.'

THE *American Journal of Physiology* issued on July 1st contains the following articles: 'On intestinal Absorption and the Saline Cathartics,' by George B. Wallace and Arthur R. Cushny. 'The Movements of the Food in the Œsophagus,' by W. B. Cannon and A. Moser. 'A Contribution to the Chemistry of Cytological Staining,' by Albert Mathews. 'Notes on Cetraria Islandica (Iceland Moss),' by Ernest W. Brown Ph.D. 'Variations in the Amylolytic Power and Chemical Composition of Human Mixed Saliva,' by R. H. Chittenden and A. N. Richards, B. A. 'The Venometer Nerves of the Hind Limb,' by F. W. Bancroft. 'An Analysis of the Action of the Vagus Nerve on the Heart,' by L. J. J. Muskens. 'A New Method for the Study of the Isolated Mammalian Heart,' by W. T. Porter.

The Open Court for July contains as a frontispiece a portrait of Lobachèvsky taken from the bronze statue placed recently in the square now bearing his name, facing the University at Kazan, and the number contains an interesting account of the great geometer by Professor George Bruce Halsted.

Under the title 'The Fastest Vessel Afloat' Mr. Cleveland Moffett describes, in the July number of *McClure's Magazine*, the 'Turbina' and a trip upon it in which the extraordinary speed of 40 miles an hour was attained. The writer holds that the Turbine engine will revolutionize steamship travel where there is a plentiful supply of coal.

SOCIETIES AND ACADEMIES.

TORREY BOTANICAL CLUB, MAY 10, 1898.

THE first paper, by Dr. Arthur Hollick and Mrs. Elizabeth G. Britton, was entitled 'A Description of a new Fossil Moss from Seattle, Washington, collected by Professor I. C. Russell.' The paper was read by Dr. Hollick, who also exhibited the original specimen, a fragment sent to Mrs. Britton for identification by Professsr F. H. Knowlton, of the National Museum in Washington. Professor Knowlton supplied the following facts: "The specimen was collected by Professor I. C. Russell in July, 1897, near Cle Elum, Kittletas Co., Washington, and occurs in the Roslyn sandstone; its age is probably lower Miocene or Upper Eocene. It is associated with species of *Lygodium*, *Ulmus*, *Planera* and a number of other beautifully preserved leaves. It is in any case the oldest undoubted moss thus far found in this country. The so-called *Hypnum Haydeni* of Lesquereux is with little doubt a *Lycopodium*." The specimen represents only the tip of a branch, about one-half inch in length; it is sterile and has been compared with figures and descriptions of other fossil American mosses, and differs from them all. It is undoubtedly a new species of the *Hypnaceæ*, probably a *Rhynchostegium*, and will be named for its discoverer, Professor Knowlton.

Dr. Hollick showed a drawing of the fossil species and also several drawings made from living species which it most resembles. None of these, however, are exact equivalents.

In the discussion following, it was remarked by Mr. Hollick that fossil mosses are extremely rare. All specimens known are Tertiary or later, one reported from a Carboniferous horizon being now thought doubtful; but the existence of mosses in Jurassic times is inferred from the existence of an insect then, the present repre-